

REMARKS

The present amendment is responsive to the Office Action dated December 21, 2004. Claims 1-2, 4-8, 11-16, and 18-22 have been amended. Claims 3, 10, and 17 have been cancelled. Claims 1-2, 4-9, 11-16, and 18-22 are again presented for consideration.

The disclosure was objected to because of several informalities. The informalities have been remedied by correcting the relevant paragraphs in the specification. No new matter has been added. Therefore, applicants respectfully request that the objection be withdrawn.

Claims 1-6, 8-13, 15-20, and 22 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,577,998 ("Yamamoto") in view of U.S. Patent No. 6,538,666 ("Ozawa"). Applicants respectfully traverse the rejection.

Yamamoto is directed to an animation system that enables a performer to alter the characteristics of an animated character in response to the performer's voice. (See Abstract.) According to *Yamamoto*, the voice input from the performer is processed by a central processor 144 to determine a set of parameters for animating the character. "In determining the animation, a controller 142 also polls additional input devices such as a control pad 138 and a foot switch 140 [which provide] additional input signals for determining the animation sequence. For example, the additional input signals indicate expressions of the character such as anger, happiness and surprise. In addition, the additional input signals also indicate the orientation of the face with respect to the audience." (Col. 6, Ins. 38-48.) The system includes a voice analyzing unit 12 for analyzing a voice input from the performer "so as to determine a volume parameter, a volume change parameter, a pitch parameter and a pitch change parameter. Upon receiving a trigger signal from an animation generator 15, the voice analyzing unit 12 adjusts the values of the above-described voice parameter set according to a voice parameter profile 16, which includes adjustment values for adjusting a predetermined characteristic of the voice input." (Col. 7, Ins. 15-22.)

Yamamoto discloses a wave analysis process in which:

a basic frequency change analysis step generates a frequency change parameter and a frequency parameter based upon the basic frequency signal. In addition, a volume change analysis step generates a volume

parameter as well as a volume change parameter based upon the volume signal. The parameters are sent to the voice parameter generation process S8 for generating voice parameters.

(Col. 9, Ins. 20-27.)

Once the basic frequency of an input voice signal is determined, "the basic frequency value is placed in a frequency parameter. In addition, the frequency value is compared to the last determined frequency value to determine a difference in frequency value between the current and the last input signal. The above difference value is placed in a frequency change parameter. Lastly, the last frequency value is updated by the current frequency value." (Col. 9, Ins. 41-48.) With respect to a volume change, a "volume value is placed in a volume parameter and is compared to a previous volume value to determine a difference in volume value between the current and the last volume signals. After the difference is determined, the difference value is placed in a volume change parameter, and the last volume parameter is updated by the current volume value." (Col. 9, Ins. 53-59)

After the voice parameters are generated, "the system generally generates an animation sequence for animating a character according to the voice input from a step S40. To realistically animate the character, in steps S42 and S44, the currently generated voice parameter is compared to the last stored voice parameter so as to determine a context sensitive factor for the animation. In other words, for example, if the mouth is already open as indicated in the last voice parameter and the current voice parameter indicates no input voice. The next animation sequence frames should include the closing movements for the mouth." (Col. 10, Ins. 18-30.)

Thus, it is clear that the voice parameters (volume parameter, volume change parameter, pitch parameter, and pitch change parameter) are based on current and previous information obtained from the performer. In particular, the "change" parameters are determined by taking the difference between current and last signals. However, this is not what the amended independent claims require. The features of cancelled claims 3, 10, and 17 have been incorporated into independent claims 1, 8, and 15, respectively.

For example, apparatus claim 1 now includes "reference voice data storage means for storing voice data in advance as an evaluation reference for the relative

sound interval and the sound volume of to the voice to be inputted by the player; wherein said character control means periodically compares the extracted information of the relative sound interval and the extracted information of the sound volume with the evaluation reference voice data, determines operation contents of the character based on the comparison, and makes the character perform an operation according to a result of the comparison."

Method claim 8 now includes "periodically comparing the extracted information of the relative sound interval and the extracted information of the sound volume with evaluation reference voice data, the evaluation reference voice data being prepared in advance and including an evaluation reference for the relative sound interval and the volume of the voice to be inputted by the player; and changing the operation of the character based on a result of the comparison."

The storage medium of claim 15 now includes storing "evaluation reference voice data prepared in advance and including an evaluation reference for the relative sound interval and the sound volume of the voice to be inputted by the player;" and "periodically compar[ing] the extracted information of the relative sound interval and the extracted information of the sound volume with the evaluation reference voice data; and mak[ing] the character perform an operation according to a result of the comparison."

Independent claim 22 now requires "periodic comparison of the extracted information of the relative sound interval and the extracted information of the sound volume with evaluation reference voice data, the evaluation reference voice data being prepared in advance and including an evaluation reference for the relative sound interval and the sound volume of the voice to be received through the voice input device; and character control processing for making the character perform an operation based on a result of the comparison."

The evaluation reference voice data required by the independent claims is prepared/stored in advance, and is not voice information from the player. (See Specification, pg. 9, Ins. 3-6; pg. 10, line 18 to pg. 11, line 3.) The evaluation reference voice data and the use of such data required by the independent claims is neither disclosed nor suggested by *Yamamoto*. The deficiencies of *Yamamoto* are not remedied by *Ozawa* or the other art of record.

For example, Ozawa discloses an image processing system that "changes the way speech recognition results are processed as the program progresses." (Abstract.) The speech recognition process operates as follows. Speech from a user is digitized and compared against data stored in a RAM. (See col. 8, Ins. 40-51.) DSP 521 (FIG. 3) compares the digitized speech with the data stored in the RAM and "calculates the correlation distance representing the degree of their similarity...The DSP 521 computes the similarity or correlation distance for all words stored in the dictionary RAM 54. " (Col. 8, Ins. 57-64.) This enables the system to determine which word a user has spoken and to perform a corresponding action. (See col. 16, Ins. 23-29.) Thus, while Ozawa performs a speech recognition process, it does not provide or process evaluation reference voice data as required by the independent claims.

Therefore, for at least these reasons, applicants respectfully request that the rejection of independent claims 1, 8, 15 and 22 be withdrawn. Dependent claims 2, 4-6, 9, 11-13, 16, and 18-20 depend from independent claims 1, 8, and 15, respectively, and contain all the limitations thereof as well as other limitations which are neither disclosed nor suggested by the art of record. Accordingly, applicants submit that the subject dependent claims are likewise patentable.

Notwithstanding the deficiencies of the art and the allowability of the independent claims and the subject dependent claims, dependent claims 4-5, 11-12, and 18-19 are also allowable for the following reasons.

The Examiner acknowledged that neither Yamamoto nor Ozawa teaches the limitations of claims 4, 11, or 18 (Office Action, pg. 5, numbered paragraph 6.) The Office Action states "It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Yamamoto and Ozawa to have an expression mode display means for indicating an expression mode of the voice to be inputted by the player because it would indicate to the user the appropriate way to express the input so as to obtain the preferred output hence making the system more user friendly." (*Id.*)

The Examiner also acknowledged that neither Yamamoto nor Ozawa teaches the limitations of claims 5, 12, or 19 (Office Action, pg. 5, numbered paragraph 7.) Here, the Office Action states "the Examiner takes Official Notice that changing the rate of animation to correspond with the rate of speech from the user is well known in the

art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of *Yamamoto* and *Ozawa* so that the character control means changes a regenerating speed of said image data on the basis of the difference between timing for indicating contents of the voice to be inputted by said player and timing for starting the input of the voice by the player because it would give the animation a better appearance to have the sound and image synchronized and using a reference timing would give a fast and accurate calculation of the rate of the user's speech which would speed up processing." (*Id.* at pgs. 5-6.)

As to the issue of motivation to modify the *Yamamoto* and *Ozawa* references with respect to the rejections of claims 4, 11, and 18, as well as claims 5, 12, and 19, the Examiner's rationale is both conclusory and based on knowledge gleaned only from the applicants' disclosure. Here, although the Examiner concludes that it would be obvious to modify the *Yamamoto* and *Ozawa* references in order to perform the additional claimed limitations not disclosed in either reference, he does not cite any portion of either reference (or any other art of record) to support this conclusion. Thus, the Examiner's basis for a motivation to modify the teachings of the *Yamamoto* and *Ozawa* references is wholly improper because it is both based on subjective belief and unknown authority.

If the Examiner is basing his conclusions as to a motivation to modify the *Yamamoto* and *Ozawa* references on facts within his personal knowledge, applicants respectfully request that he provide such factual data as specifically as possible and support the conclusion by way of a signed affidavit. See M.P.E.P. § 2144.03(C); see also 37 C.F.R. § 1.104(d)(2). If the conclusions are based on uncited references, applicants respectfully request that such references be appropriately identified. See 37 C.F.R. § 1.104(c)(2).

Although the Patent Office recognizes that any judgment on obviousness is, in a sense, necessarily a reconstruction based upon hindsight reasoning, such reasoning is only permissible when it is based on knowledge of the prior art and does not include knowledge gleaned only from the applicants' disclosure. M.P.E.P. § 2145(X)(A), citing *In re McLaughlin*, 443 F.2d 1392 (C.C.P.A. 1971). The Federal Circuit has also held that it is improper to "use that which the inventor taught against its teacher" in connection with establishing a motivation to combine references of the prior art. *In re*

Sang-Su Lee, 277 F.3d 1338, 1344 (Fed. Cir. 2002), quoting *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983). The same standard would apply to the Examiner's motivation to modify the references.

Here, the Examiner has clearly engaged in improper hindsight reconstruction because he cites a motivation to modify the teachings of the *Yamamoto* and *Ozawa* references that exists only in applicants' disclosure. Indeed, the desirability of either displaying or indicating an expression mode, or changing a regeneration speed based on timing differences are not found in either of the *Yamamoto* or *Ozawa* references. As noted above, however, it is found only in applicants' specification. Therefore, the Examiner has improperly used "that which the inventor taught against its teacher."

Therefore, applicants respectfully submit that dependent claims 4-5, 11-12 and 18-19 are patentable for these reasons as well as the reasons stated above with respect to the independent claims.

Claims 7, 14, and 21 were rejected under 35 U.S.C. § 103(a) as being obvious over *Yamamoto* in view of *Ozawa* and U.S. Patent No. 6,766,299 ("*Bellomo*"). Applicants respectfully traverse the rejection. Claims 7, 14, and 21 depend from independent claims 1, 8, and 15, respectively, and contain all the limitations thereof as well as other limitations which are neither disclosed nor suggested by the art of record. Accordingly, for at least the reasons stated above, applicants submit that these dependent claims are likewise patentable.

As it is believed that all of the rejections set forth in the Office Action have been fully met, favorable reconsideration and allowance are earnestly solicited. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefore.

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Respectfully submitted,

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